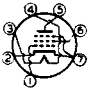
9001

DETECTOR AMPLIFIER PENTODE

MIDGET TYPE

Heater ■	Coated Unipotential Cathode	
Voltage	6.3	a-c or d-c volts
Current	0.15	amp.
Direct Interelectrode Capacitances:		
Grid to Plate	0.01 max.	μμf
Input	3.6	μμf
Output	3.0	μμf
Maximum Overall Length		1-13/16"
Maximum Seated Height		1-9/16"
Length from Base Seat to Bulb Top (excluding tip)		1-3/16" ± 3/32"* ←
Maximum Diameter		3/4"
Bulb		T-5-1/2
Base▲		Miniature Button 7-Pin

Pin 1 - Grid
Pin 2 - Cathode
Pin 3 - Heater
Pin 4 - Heater



Pin 5 - Plate
Pin 6 - Screen
Pin 7 - Cathode, Grid No. 3, Internal Shield

BOTTOM VIEW

RCA Socket	Stock No. 9914 ←
Mounting Position	Any

Maximum and Minimum Ratings Are Design-Center Values

AMPLIFIER

Plate Voltage	250 max.	volts
Screen Voltage	100 max.	volts
Grid Voltage	-3 min.	volts
Plate Dissipation	0.5	watt ←
Screen Dissipation	0.1	watt ←

Typical Operation and Characteristics - Class A_1 Amplifier:

Plate Voltage	90	250	volts
Screen Voltage	90	100	volts
Grid Voltage	-3	-3	volts
Plate Resistance	1.0	● approx.	megohm
Transconductance	1100	1400	μmhos
Plate Current	1.2	2.0	ma.
Screen Current	0.5	0.7	ma.

Typical Operation as Mixer in Superheterodyne Circuit:

Plate Voltage	100	250	volts
Screen Voltage	100	100	volts
Grid Voltage #	-5	-5 approx.	volts
Conversion Transconductance	-	550 approx.	μmhos

Shielding and *r-f by-passing* of each r-f amplifier stage may be required in order to prevent interstage coupling and to provide the shortest possible circuit returns when the tube is operated at the ultra-high frequencies. R-f by-passing can be accomplished by the use of small condensers having short leads placed close to the tube terminals. It may also be advisable in some applications to supplement the action of the by-pass condensers by r-f chokes close to the condensers in the return or supply leads for the grid, screen,

■, ▲, ●, #: See next page.

*Temporary minimum length = 1-1/16".

← Indicates a change.

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9001

DETECTOR AMPLIFIER PENTODE

(continued from preceding page)

plate and heater. The 9001 has two cathode leads in order that the plate and screen r-f circuits may be completed with a minimum of circuit inductance in common with the grid circuit. The grid return may be connected to one cathode terminal and the plate and screen returns may be connected to the other cathode terminal.

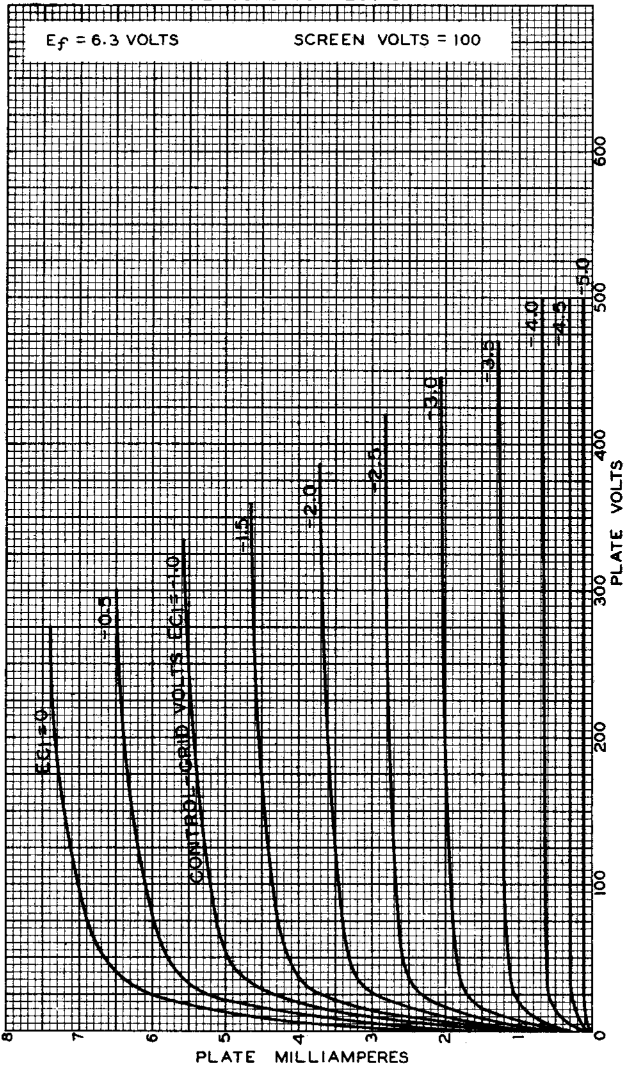
■ The cathode of the 9001, when operated from a transformer, should preferably be connected to the heater circuit. In the case of d-c operation of the heater from a storage battery, the cathode circuit is tied in either directly or through bias resistors to the negative battery terminal. In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.
● Greater than 1.0 megohm.
The grid bias is minimum for an oscillator peak voltage of 4 volts. These values are optimum.

▲ *The center hole in sockets designed for this base provides for the possibility that this tube type may be manufactured with the exhaust-tube tip at the base end. For this reason, it is recommended that in equipment employing this tube type, no material be permitted to obstruct the socket hole.*

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9001

AVERAGE PLATE CHARACTERISTICS
PENTODE CONNECTION



MAY 22, 1941

RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

92C-6291

9001

DETECTOR AMPLIFIER PENTODE

